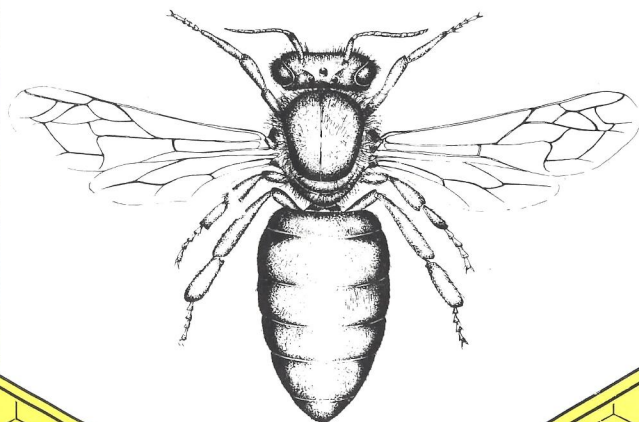


RAY OF PLenty POLYTECHNIC  
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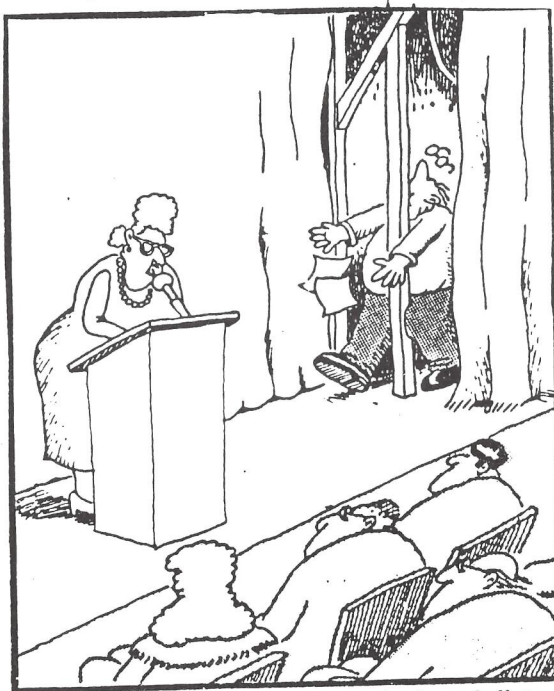
# beelines

Number 32 August 1987

MAF Nelson Andrew Matheson Apicultural Advisory Officer

## CONTENTS

	Page
Cheaper lactalbumin	2
Differences between German and common wasps	3
New wasp bait	8
Poisoning wasp nests	10
Getting good publicity	11
Grape honey?	13
How to improve your queens	13
Tips for good mating	16
Industry trends	18
Making hand-dipped candles	20
New service for exporters	23
New trading laws will affect you	25
Winter cold remedy	27

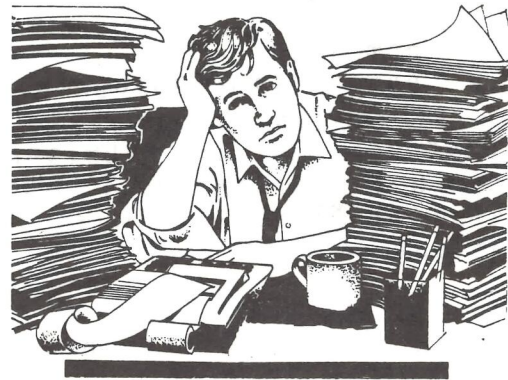


**"And so, without further ado, here's the  
author of 'Mind over Matter'"**



Conference '87 must go down as one of the most productive and unifying on record. A few years ago even the mere mention of importing bees (under quarantine) would have left the debating room awash with blood - now everyone seems able to discuss the issues involved in a fairly level-headed way.

I commented to someone that in the space of a couple of hours on the Thursday afternoon the beekeeping industry had moved forward twenty years. The wag replied "What year does that put beekeepers in now?"

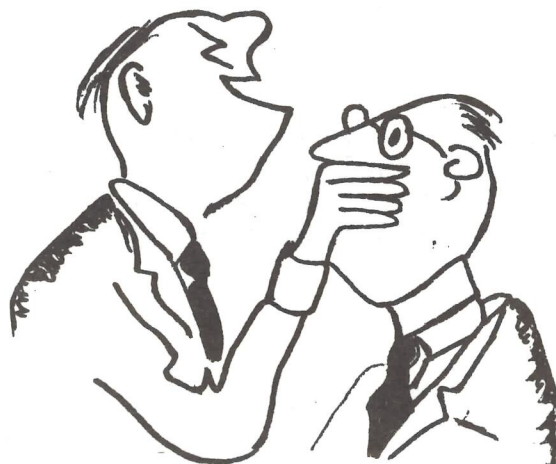


The way the importation debate and other issues were discussed shows that your industry is now a leader among New Zealand's primary industries. Beekeeping is fast getting a reputation as a sector that is using industry planning well and achieving results. That's a far cry from the eccentric and mysterious craft it used to be regarded as.

\*\*\*\*\*

#### HEARD AT CONFERENCE

- \* "Many of you are not in beekeeping to make money, but you realise that making money is necessary to stay in beekeeping."
- \* "Some people can say they've been in beekeeping all their lives - when others are questioned about how long they've been in bees they ask what time it is."
- \* "Drinking Diet-Coke for years can cause an overwhelming desire to sell arms to Iran."



## QUEEN AND PACKAGE BEES

MAF has collected figures for commercial production of queen and package bees for the 1986/87 production year.

Queen bees:

- domestic	73,900
- export (including those in packages)	40,391

Packages

- export	6,634
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## CHEAP LACTALBUMIN AVAILABLE

Lactalbumin is one of the better ingredients for a pollen supplement - mixed with brewer's yeast, sugar and natural pollen it provides a good protein diet for bees.

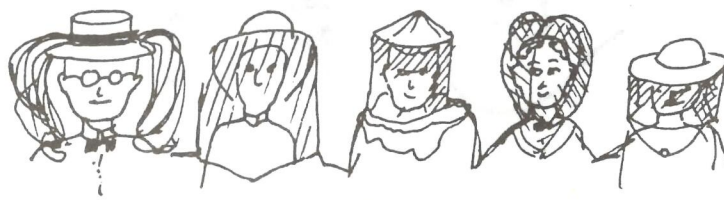
The main problem with lactalbumin has been its price. I've recently been talking to the suppliers, Alaco, who tell me that a cheaper product is sometimes available.

From time to time lactalbumin doesn't meet the high quality standards required for a food-grade product. Reasons for rejection include high coliform (bacteria) count, and presence of casein fines (1-2%). This "reject" lactalbumin should still be OK for bee feed.

The price looks good : \$3.25/kg for the seconds, versus \$5.50/kg for food grade. These prices are ex-store, which may mean ex-North Island, but Alaco in Christchurch might be able to organise a freight deal if there's enough interest. (Remember that the cheaper product is made only by accident, so is not always available).

Lactalbumin is presently unavailable, and there won't be any for sale until the new dairy season gets in full swing later this month. Casein or the soluble caseinates may be used as an alternative in the meantime - they're \$5.65-\$5.80/kg.

For further information contact Alaco's technical sales representative Margaret Caldwell, P O Box 14-162, Christchurch phone (03) 583 837 (collect). She also has a Wellington office (P O Box 417) - phone (04) 723 630 (free phone).





## SPOTTING WASPS ...

A lot of you have been asking me about the differences between the German and common wasps. A story in many newspapers contained a photo of the common wasp, together with the statement that these wasps "have a black dot often connected to a black band at the front of each segment of their abdomen. German wasps have separate dots."

Well, that's correct, but like a lot of rules in nature things aren't always that simple. I've included in this issue a comparison of the two species. The fine illustrations and much of the information in this article come from a paper by Dr Barry Donovan of DSIR's Entomology Division, which is listed at the end of this article.

There are four key things to look for when distinguishing German and common wasps.

- facial markings
- yellow band behind the eyes
- yellow band on the thorax
- black spots on the abdomen

### Facial markings

If you look at a wasp right between the eyes you'll see a black marking, just above the mouth and where the nose would be on a human face. (This area is called the clypeus). In common wasps this marking is shaped like an anchor, while German wasps have just a straight line (figures 1 & 4). This feature really only works for workers and queens.

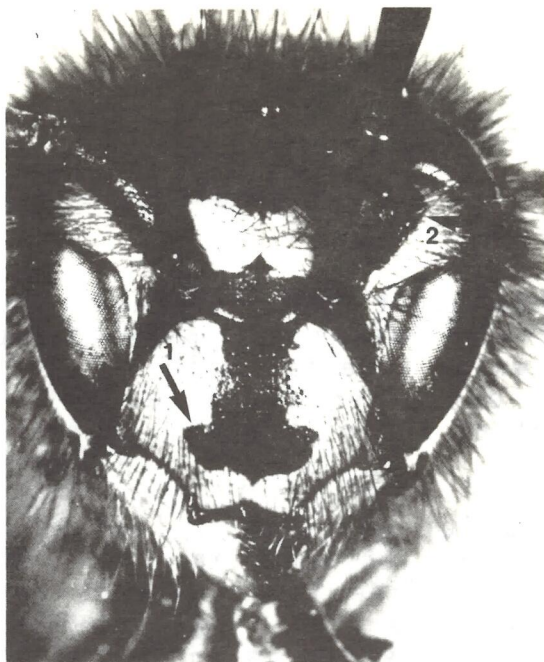
### Yellow band behind the eyes

Running from top to bottom of the head, immediately behind the compound eye, is a yellow band. In German wasps this band is continuous; in common wasps it is interrupted about two-thirds of the way down by black (figures 2 & 5). This feature also only applies to workers and queens, but don't worry - we'll get to the drones eventually.

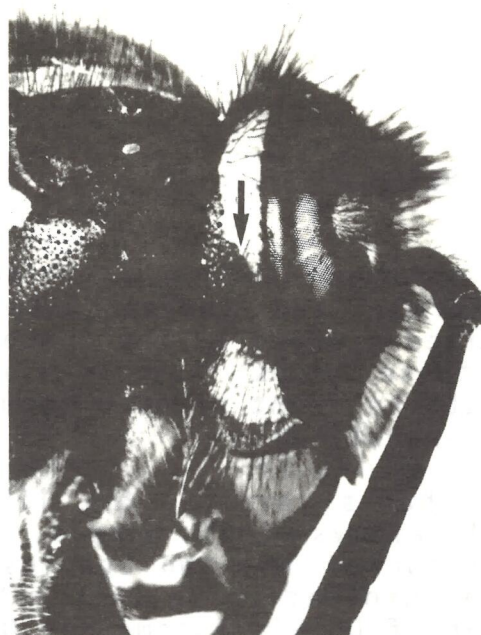
### Yellow band on thorax

The thorax is the middle section of the wasp. Just in front of the forewing root, and just behind the "neck", is a yellow band (figures 3 & 6). The distinguishing feature is whether the band has parallel sides. In the German wasp this band has a downwards





**Fig. 1** *Vespula vulgaris*, worker, face. Note prominent black 'anchor' shape on clypeus (arrow 1), and black area above antennal socket expanded into angle of compound eye (arrow 2).



**Fig. 2** *Vespula vulgaris*, queen, right lateral aspect of head. Yellow genal band adjacent to compound eye is interrupted medially by black (arrow).



**Fig. 4** *Vespula germanica*, worker, face. 'Anchor' much reduced, (arrow 1); black area above antennal socket not invading angle of compound eye (arrow 2).



**Fig. 5** *Vespula germanica*, queen, right lateral aspect of head. Yellow genal band adjacent to compound eye continuous (arrow).

bulge in the middle, while the common wasp's band has parallel sides. Yes, queens and workers only for this one too.

#### Black spots on abdomen

Yes, here it is, the feature you can use to tell drones apart. German wasps *usually* have spots free from the black bands across the top of the abdomen, while in common wasps the spots are





Fig. 3 *Vespula vulgaris*, queen, right lateral aspect of pronotum. Yellow pronotal band has parallel sides (arrow).



Fig. 6 *Vespula germanica*, queen, right lateral aspect of pronotum. Yellow pronotal band produced below (arrow).

usually fused with the bands.

There is some variation within each species on this characteristic, and you can see from figures 9-12 that there's some difference between male and queen common wasps in how closely the spots are joined to the bands.

#### Male facial markings

There is another, minor characteristic that you might need to distinguish males of different species. The black area between the bottom of the two antennae (just above the clypeus) is partly invaded by yellow colouring in the common wasp, while the area is completely black in the German. (Figures 7 & 8).

You'll also see in those figures how an anchor shape on the clypeus is not a reliable feature for distinguishing males.

#### Summary

So here's a summary of the characteristics you can use to distinguish the common and German wasps.



Fig. 7 *Vespula vulgaris*, male, face. Black area between antennal sockets invaded by at least some yellow (arrow).

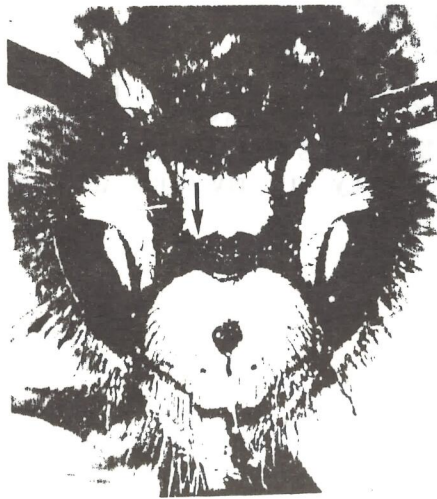


Fig. 8 *Vespula germanica*, male, face. Area between antennal sockets black (arrow).

	<i>Vespula vulgaris</i> (common)	<i>Vespula germanica</i> (German)
<b>Queens and workers</b>		
Facial marks	black anchor shape (Fig. 1)	black line or dots (Fig. 4)
Yellow band behind eye	interrupted by black (Fig. 2)	complete (Fig. 5)
Yellow band on thorax	parallel-sided (Fig. 3)	widened below, in the middle (Fig. 6)
<b>Males</b>		
Facial marks	line or spots (Fig. 7)	line or spots (Fig. 8)
Interantennal area	invaded by yellow (Fig. 7)	black (Fig. 8)
<b>All castes</b>		
Abdominal marks	usually without free black spots, queen (Fig. 9) male (Fig. 11)	usually with free black spots, queen (Fig. 10) male (Fig. 12)
<b>Nests</b>		
Colour of nest envelope	light mottled brown	grey

## Reference

The paper by Barry Donovan outlines the early sightings of the common wasp, and describes its habits so far observed in New Zealand. He also discusses the species' pest status overseas and likely impact in New Zealand.

You can get copies of this article for \$2.75 (GST inclusive) from the Science Information Publishing Centre, DSIR, P O Box 9741, Wellington.

The paper's reference is: Donovan, B. J. 1984. Occurrence of the common wasp, *Vespula vulgaris* (L.) (Hymenoptera : Vespidae) in New Zealand. *New Zealand Journal of Zoology* 11 : 417-427.

## Paper wasps

The north of the North Island has, among other things, two species of paper wasps. If you disturb their nests you'll soon find that their sting makes German wasps seem pretty friendly-I've had one fly up my arm using its sting like a sewing machine needle!





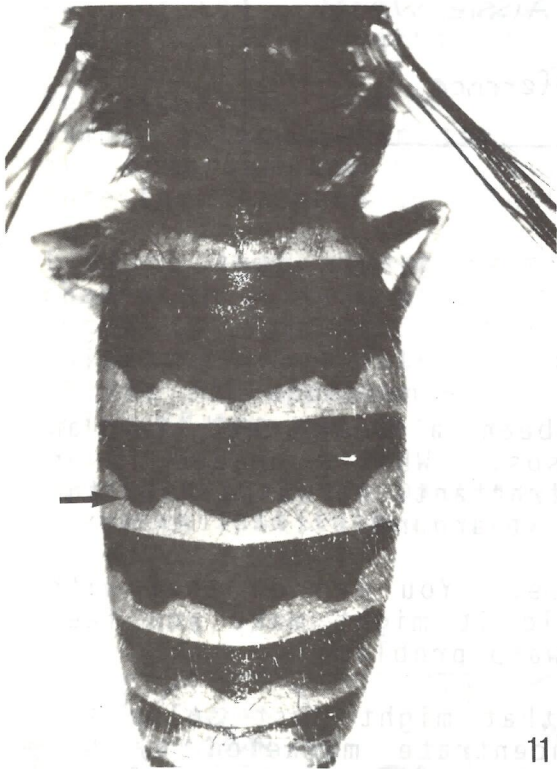
9

*Vesputa vulgaris* queen



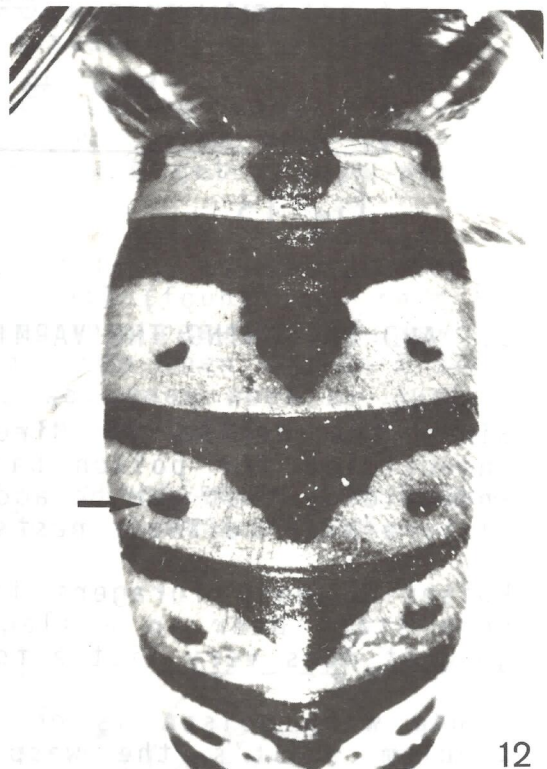
10

*Vesputa germanica* queen



11

*Vesputa vulgaris* male



12

*Vesputa germanica* male

These species, the Australian and the Asian paper wasps, are more delicate or spindly than German wasps and have different colouring. The Australian one is light brown, and although the Asian wasp has yellow and black on its body it is still quite different from the German wasp. Figure 13 (what else?) is a key for distinguishing these wasp species.



Fig. 13

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### ... AND POISONING THE VARMINTS ...

Since the demise of Mirex there's been a real need for an insecticide for poison baiting of wasps. What's needed is an insecticide that can be added to an attractant, so wasps take the mixture back to their nests and spread it around.

Poisoning wasp foragers isn't much use. You can do that with some stale beer in a flagon, but while it might make you feel good it does very little to solve the wasp problem.

A new wasp poison is on the market that might just solve the problem. It's the wasp killer concentrate marketed by Bug bar/Kiwicare Corporation, who are one of the sponsors of the MAF/DSIR wasp survey.



This product is sold in small (100 ml) bottles of concentrate. In fact there's a whole range of these killer concentrates, labelled for spiders, fleas, ants, flies and so on. They all contain the same thing - 2.9% permethrin - and retail for about \$6.

Now the label on the wasp killer talks about mixing it up with sugar syrup, but of course you wouldn't do that. The way to use it is to mix one capful (not a cupful) with 100 ml of water, and spray onto a meat bait (lean, gamey meat with low fat content is preferred - hare is the best, mince is OK).



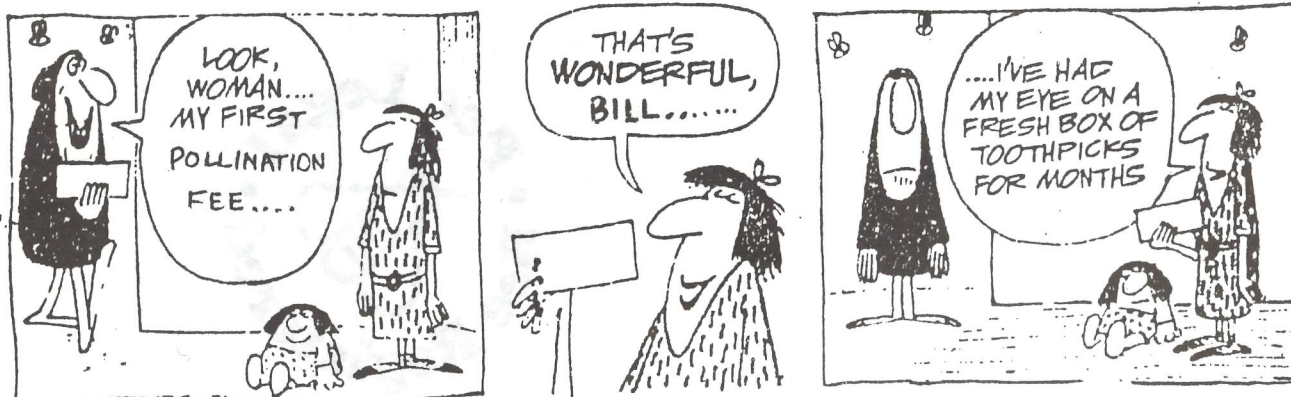
The sprayed bait must be kept out of direct sunlight, otherwise the insecticide breaks down. Forestry workers have been hanging pieces of treated meat inside an upside-down kerosene tin suspended from a tree.

I have to say that I haven't tried this method, because I got hold of the product just as the wasps disappeared for the season. But it could be worth experimenting next season.

We might be wasting our time poison baiting wasps in late summer/autumn, when they start to bother us. The wasp colonies are numerous and huge then, and it's hard to get enough poison into them to have an effect.

I think that spring baiting could be useful, as you'd have a chance of getting enough poison into a small (foundling) nest to knock it for six. You wouldn't see any results of spring poisoning until later in the season, and even then wouldn't know if the non-appearance of the blighters was your work or just a quirk of the weather. Worth a try though, isn't it?

So the permethrin bait might work, and a scientist at the Forest Research Institute at Ilam is trying 1080 as a wasp poison.



## ... WHEN YOU'VE FOUND THE NESTS

A couple of notes about poisoning nests when you can find them.

- \* Carbaryl is the insecticide usually recommended, because it's safer to humans than many others, and breaks down in the environment fairly quickly without leaving toxic residues. There's absolutely no need to use that primitive old pesticide DDT.
- \* Most carbaryl you buy is 80% active ingredient (usually described as 80% WP), but the makers tell me that 5% is perfectly sufficient. You can dilute it 1 part carbaryl to 15 parts carrier (like lime or some other powder) before use. This makes it go much further and saves you money.
- \* For fumigating nests in enclosed spaces (like in floor spaces, roof cavities and wall linings) we used to recommend "borer bombs." You light them and retreat quickly as insecticide is sprayed everywhere. There's two problems with these: the heat generated can set your house on fire and the lindane used is a very toxic and long-lasting insecticide.
- \* Now there's another product available - the Kiwicare "Bug Bomb." It's a one-shot aerosol, so there's no fire danger. The insecticide used is permethrin - while this is still dangerous to humans it breaks down quickly and doesn't leave long-lasting residues to contaminate the environment.



DISCLAIMER - Mention of any product or supplier in this magazine does not imply endorsement by MAF, nor recommendation over similar products or suppliers not included.

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## A REMINDER

If you're interested in purchasing wasp parasites for release in your area, you must act soon. There won't be any more reminders for next season, as it will be too late next time *Beelines* comes out.

Contact: Dr Barry Donovan  
DSIR Entomology Division  
Private Bag  
CHRISTCHURCH

Phone (03) 252 511

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## NO NEWS IS BAD NEWS

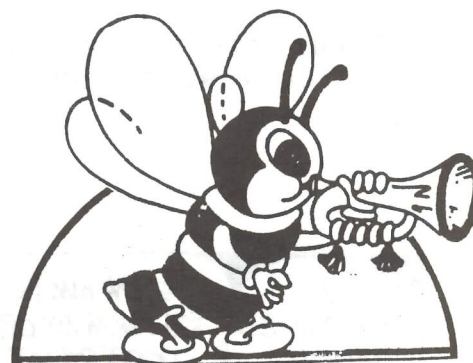
I'm sure you've all seen cases of poor reporting about bees. It seems that some reporters regard bees and beekeeping as fair game for off-beat stories, bad puns and comments on trivia.

A recent example occurred in Florida when a newspaper ran a story on a spring dwindling problem. The first sentence of the article read: "Honey bees are dropping like flies in Florida's panhandle, stinging the wallets of beleaguered beekeepers."

Malcolm Sanford, a beekeeping adviser in Florida, comments that "this example should provide a clear idea of what to expect when either Africanized bees or *Varroa* mites become the subject of press coverage. It will be for the most part sensationalist, negative and will provide little sympathetic information about the bee industry and its problems. This is the kind of information that sells newspapers and catches the attention of radio listeners and television viewers alike. The question, therefore, arises as to what beekeepers and the industry should be doing to ensure fair press coverage in the future."

There are a lot of solutions to this problem - most of them are in beekeepers' hands. What can we do?

I think we should take our observation hives and our jars of honey and our bowls of fruit and vegetables and go into the schools. Teachers are delighted to have resource persons visit their classes. There's almost no-one in New Zealand without a direct connection to a school, either because you have a child attending



or because you know someone on the staff. How about deciding to do at least one school visit a year?

Each region has at least one newspaper and one radio station. Every news outlet could carry some sort of bee or honey story once a year if all ideas were fully explored. Probably all you would have to do is approach the editor with an idea.

Some NBA branches have publicity officers to exploit these opportunities - how about your branch doing the same? Choose someone with a flair for PR work and an eye for topical issues. Give them reasonable autonomy so they don't have to wait for a branch meeting to get approval to speak - by then it's too late.

Some ideas : swarm-catching, harvest time (a bumper crop or a crop failure), effect of exchange rate on local producers, cooking with honey, local beekeeper named to national office, local association's field day, interesting guest speaker addresses local bee club, national association to meet in town ...

Now, you may have had problems with the media. You were misquoted. The reporter knew nothing about bees and didn't want to learn anything. The article made you look like a fool.

For every problem story that comes to my attention, there's a dozen examples of good publicity. That's a pretty good ratio. Recognize that there are poor reporters, just as there are poor beekeepers. If you feel you are not getting through or are getting a bad deal, say so. If the reporters won't listen, talk to their editors.

They will have a different perspective from yours. Their readers will have a different perspective as well. You can't expect a legitimate story to be a piece of puffery - that's what advertisements are sold for - but you can expect fair, even-handed coverage. If you don't get it, find out why not.

Don't expect to get to read the article before it is published, but a responsible reporter will review with you the facts as she understands them and the comments attributed to you.

If our story isn't being told, it is because we aren't telling it. Only we can remedy this situation.

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## A HONEY BY ANY OTHER NAME?

A new product in Aussie is giving beekeepers there some worries. Bob Gulliford of the NSW Department of Agriculture tells me that a firm over there is promoting "a highly nutritious honey from grapes."



The promoters claim their product to:

- be hygienically superior to bee honey
- have 7-8 times more vitamins and minerals than bee's honey
- be free of sucrose, thus it is less sweet and sticky than bee's honey

I presume that this product is a type of grape jelly with a fancy name. However, the promotion does cast slurs on real honey.

In New Zealand, the Food Regulations 1984 state quite clearly that "honey" must be processed by bees from plant products.

(I hear that beekeepers in Oz are getting \$A1.12/kg (\$NZ 1.40) for 0-40 mm honey, and about 95c (\$NZ 1.20) for amber grades.)

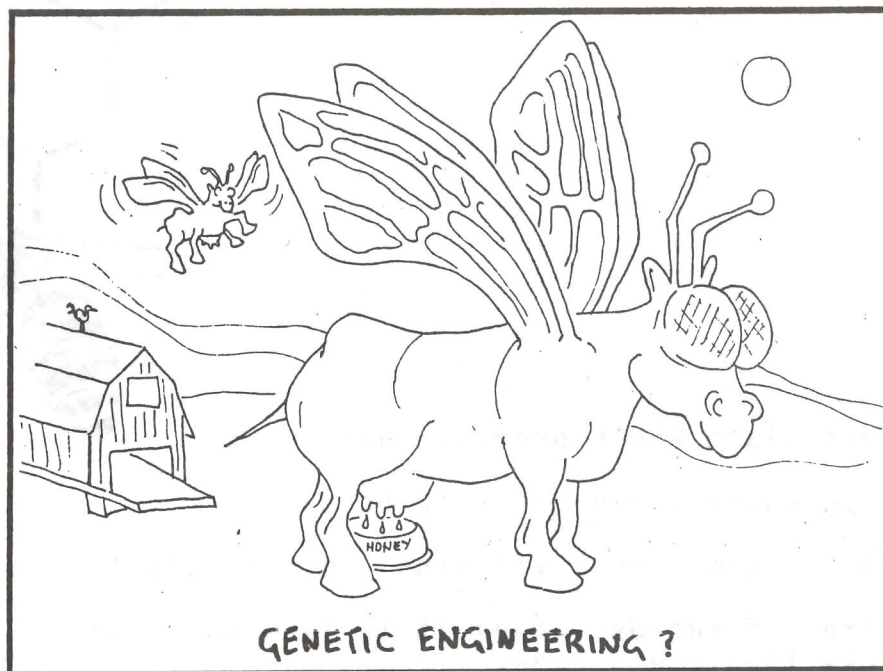
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## YOUNG GRAFTS IMPROVE YOUR QUEENS

You can make big improvements to the quality of the queens you rear, by taking only very young larvae for grafting.

If you delve a little into the processes that determine whether larvae become queens or workers, you'll see why young grafts are so important.

It's often written in books that queen and worker larvae both get fed the same food (royal jelly) for three days, and then worker larvae go onto iron rations of pollen and nectar. The starvation rations, it is implied, results in the larvae ending up as workers.



But it is now known that queens and workers get different food from the moment the first tucker is put into their cells. Under natural conditions, of course, nurse bees can easily tell which are in queen cells and are "destined" to become queens.

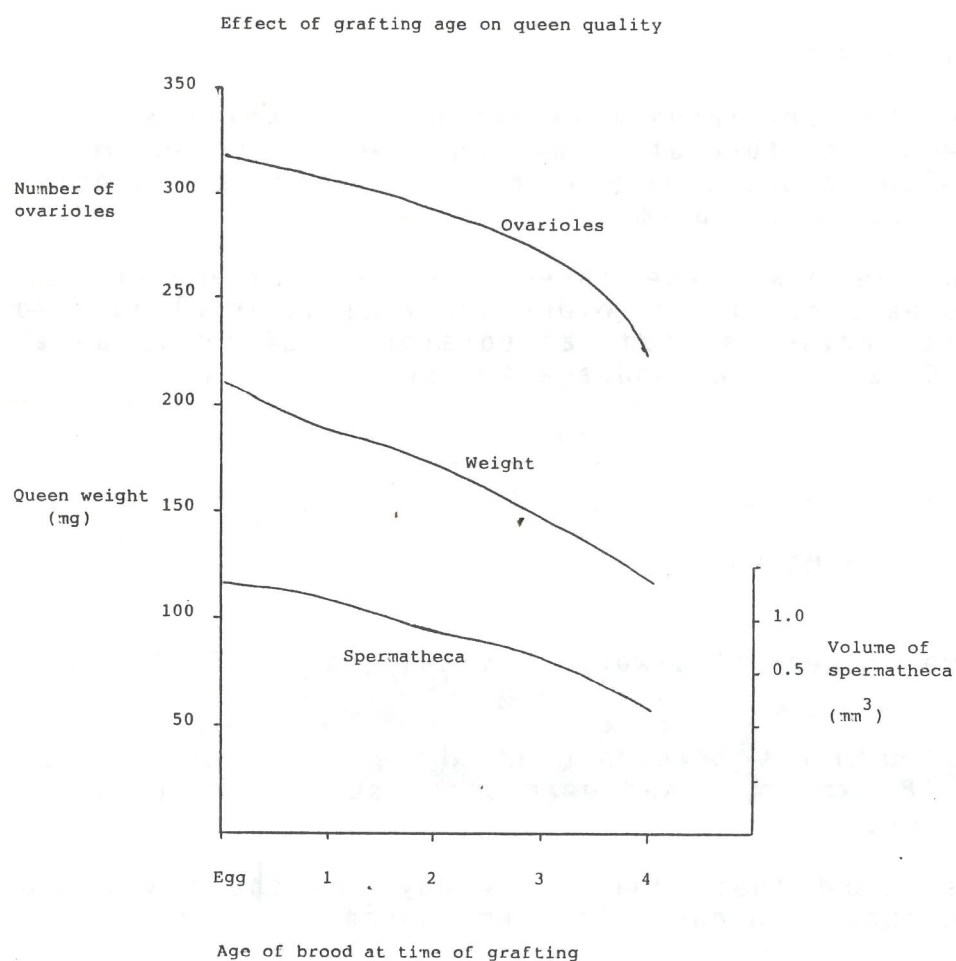
The different foods are called royal jelly (RJ) for the queen and worker jelly (WJ) for the workers. RJ and WJ differ in the levels of sugars and complex compounds.

The different balance of chemicals in WJ and RJ isn't itself responsible for queen/worker differentiation, but rather the diet acts on the larva's hormone system, which in turn affects development.

So what does all this have to do with your queen-rearing? The answer is that virtually from the moment a fertilized egg hatches in a worker cell, the larva is on the road to becoming a worker. The longer you leave it there before grafting, when the bees will change its diet, the more like a worker (and less like a queen) it will be.



I've drawn a graph to show how some of the important queen characteristics change as you use older grafting material.



### Queen weight

The weight of a queen is strongly related to the honey production of the colony she heads. You can see from the graph that, given the same rearing conditions, older grafts give much lighter queens.

Ovariole number

The number of ovarioles is extremely important in determining how useful a queen is. It dictates how many eggs she can lay each day, which governs how much brood is produced per cycle, the population of the colony and of course honey production. 300 ovarioles is reckoned to be a minimum for good-quality queens.

Spermatheca volume

The size of the spermatheca determines the maximum quantity of sperm a queen can store after mating. No matter how many drones she mates with, a queen with a small spermatheca can only retain a limited quantity of sperm.

So you can see how these three important parameters of queen quality decrease rapidly as older grafting material is used. You should graft larvae as young as possible - 24 hr is an absolute maximum, and 12 hr is a good age to use.

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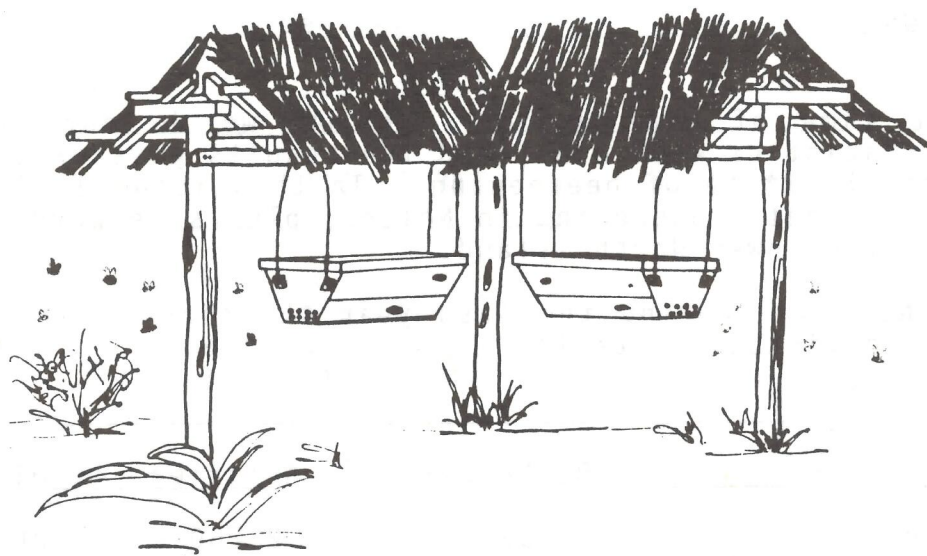
## AND GETTING THEM MATED ...

At this time of year it's worth reviewing a few facts about queen mating:

- \* Mating requires temperatures above 20°C, wind speeds less than 18 km/hr, and generally sunny or partly cloudy conditions.
- \* Drones spend their first few days in the hive, and start flying about 6-8 days after emergence.
- \* However, drones aren't sexually mature until 12-14 days old. This is why you should never graft queens until you can see plenty of adult drones in the hives.
- \* Drones continue to fly during their lifespan of 25-50 days. Most flights to congregating areas are no more than 1-2 km from the hive, though they can be up to 10 km.
- \* Drones flying in congregating areas are anywhere from 2 to 40 m above the ground - their flight is influenced by ground features, winds and temperatures.
- \* Drone flights are mostly in the afternoon and last for 20-40 minutes. Individual drones may fly four or more times in a day.



- \* Queens begin to take orientation flights 5-7 days after emergence. After a small number of these flights they go on longer mating flights - up to half an hour or more.
- \* It was reported by Israeli researchers in 1985 that queens may be attracted to drone congregation areas by a pheromone produced in the drones' mandibular glands - this chemical also attracts more drones to the spot. Drones are attracted to the queen by sight and by one of the queen pheromones.
- \* Many drones chase the queen but few are successful. A lucky one mounts the queen and his genitals literally explode. The male falls away to die and the queen is left with parts of the drone's penis, called the mating sign, in her sting chamber (perhaps he wasn't the lucky one after all).
- \* We know from some recent research by Gudrun Koeniger that the mating sign is removed by the next male during mating, and not by the queen. The final mating sign is with the queen when she returns from a mating flight - you have to be quick to see this as it is removed by nurse bees.
- \* The queen can make up to 4 separate mating flights and mate with up to 20 drones. 6-10 is usually quoted as the average number.



- \* The sperm moves to the spermatheca within 24 hours of mating. A queen can begin to lay fertilized eggs within 36 hours of mating, but remember that poor weather can restrict mating and it can take weeks (or more) before you see eggs in the hive.

- \* Queens fly 1.5-3 km from their colonies, and as most drones fly only 1-2 km from theirs, queens mostly leave behind their nest mates and drones from other hives in the same apiary. This means that drone-mother colonies should be placed about 1-2 km in all directions from mating yards, to maximise the chance of matings with desired stock.

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#### FROM THE ARK-HIVES

"MAF reports that more than 7,000 hives were moved into kiwifruit orchards in the Bay of Plenty for pollination purposes this season."

The date for that little gem? 1968? 1973? No, in fact that's out of the March 1981 *New Zealand Beekeeper*. In six years (1980-86) the figure rose from 7,000 to 53,000 hives used for kiwifruit in the Bay of Plenty.

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#### LATEST NEWS

It's that time of year again. In MAF we do our beekeeping industry statistics each June, and the results give us a snapshot picture of the state of beekeeping. In this issue I'll give you the story of what's happening in Nelson, plus some words from Ted Roberts on the lower North Island.

First in Nelson - during the last year the size of the industry has remained virtually static.

	Beekeepers	Apiaries	Hives
This year : 1987	592	2,260	26,359
Last year : 1986	596	2,268	25,907
Increase : 1986/1987	-1%	0	+2%

The rapid growth in the hive numbers over the past nine years seems to have ground to a halt, for the moment at least. If you



look back a year to *Beelines* 28 (the first issue with the new cover) you'll see a graph which shows that the number of beekeepers hasn't increased since 1983, though hive numbers were still shooting skywards until this year.

The rest of what I have to say is like one of the old good news/bad news jokes. First the good news:

### Honey crop

Total crop of saleable, surplus honey (1986/87 season)	: 966 tonnes (37.0 kg per hive)
1985/86 season	: 871 tonnes (33.6 kg per hive)
Mean for last six years	: 613 tonnes (26.7 kg per hive)

These figures are based on information from beekeepers and others in the industry.

Now the bad news - AFB. Each year we calculate a litany of figures relating to AFB levels, and for this year the tune sounds like this:

	Reported by beekeepers	Found by MAF	Total
Diseased apiaries	103 (4.6%)	27 (1.2%)	130 (5.8%)
Diseased hives	213 (0.8%)	53 (0.2%)	266 (1.0%)

That's fine, and as long as we don't go too far over 1% of the district's hives being diseased we can all get a bit complacent.

But hang on - isn't AFB a **beekeeper** disease rather than a **bee** disease? In other words, isn't it spread by beekeepers more than by bees? I certainly believe so, and sometimes I think that burning beekeepers instead of their hives would keep disease levels a lot lower.



Anyway, in the meantime I looked more closely at my disease records. This year 66 beekeepers had AFB in their outfits - that's 11% of the total.

Now what about the age-old argument of who gets the disease - those pesky, ignorant hobbyists or the lazy, sloppy commercial beekeepers? Well, again, the figures are interesting:

- 30 beekeepers in the 1-50 hive group had AFB - that's 6% of the total.
- 36 beekeepers of the 50-hive plus group had AFB - that's an amazing 54%.

Need I say more?

Ted Roberts reports that for his district things have grown a little:

	Beekeepers	Apiaries	Hives
This year : 1987	1,537	4,082	40,969
Last year : 1986	1,393	3,851	39,434
Increase : 1986/1987	+10%	+6%	+4%

Ted's been busy putting the 1,500 odd beekeepers (and presumably a few who aren't odd) and 4,000 sites onto the computer, taking the chance to purge the old manual system of dead and otherwise departed beekeepers. He reports that AFB levels are very similar to those for last year, at 3.5% of apiaries and 0.8% of hives.

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#### WINTER PASTIMES - CANDLE MAKING

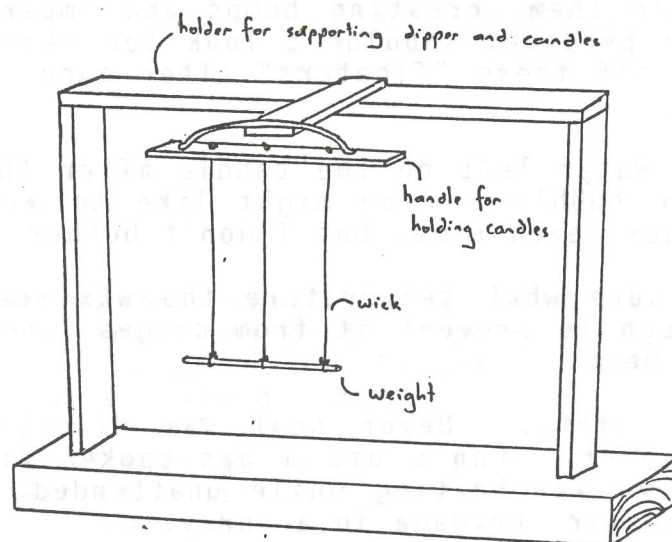
One winter job you might like to play around with is making candles. I've recently been experimenting with dipping beeswax candles, and have found a method that works really well.

Rolling softened foundation around a wick is pretty simple, and makes candles that are, well, simply pretty. But the problem with them is their short burning time. Poured candles are (I guess) fine, but where do you buy a candle mould nowadays?

So, I tried dipping. It's really simple, and here's how it works. First you need:

- \* Candle wick (from a craft or hobby shop).
- \* A container for the wax (I use a 1.25 litre apple juice tin, though something bigger would be better).
- \* A large pot to serve as a double boiler (such as a pressure cooker).
- \* A large container for cold water (a plastic bucket will do).

You're going to dip lengths of wick into both the wax and the water, so it pays to make two pieces of makeshift equipment. First, a handle to attach the tops of the wicks to, and secondly a hanger to hold this handle if you get interrupted during the dipping operation. The diagram shows what I mean. You'll also need a weight to tie the bottoms of the wicks onto - a piece of number 8 wire or a steel rod will do.



Using all these gadgets is dead simple. Here's what to do:

1. Dunk the wicks (attached to the handle and weight) into the molten wax, holding them there for 30 seconds to make sure they become saturated with wax. This is the only step with such a pause.
2. Plunge the dipper into a container of cold water and pull it straight out again without pausing.



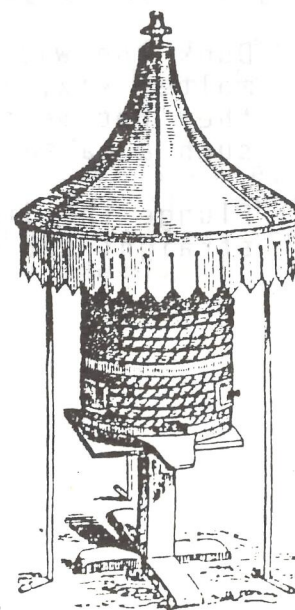
3. Sink the dipper into the wax as far as it will go and withdraw it without pausing.
4. Repeat steps 2 & 3, dipping straight in and out of wax, then water, then wax again, until the candles are as big as you want. They build up quite quickly.
5. With the dipper sitting on your hanger, cut the wicks by the base rod and trim the bottoms of the candles. (Spare wax goes straight back into your wax vat).
6. Now bury the dipper briefly one last time in the hot wax and then the cold water, to give a good tear-drop shape to the bottom.
7. Let the wax cool a little, and cut the wicks about 10 mm above the tops of the candles.

#### Problems and pointers

1. The cold water will accumulate many little pieces of beeswax on its surface. These will be picked up onto your candles as you dip them, creating bumps and imperfections. While hand-made products shouldn't look too regular, it does pay to sieve off these "floaters" after each set of candles is finished.
2. Drops of water left on the candle after the water bath may cause wax bubbles. You might like to wipe them off with your fingers each time, but I don't bother.
4. I'm not sure what temperature the wax needs to be - just warm enough to prevent it from congealling at the edges is probably best.
5. Finally, safety. **Never** heat wax directly, always use a double boiler. Don't use a gas cooker if you're indoors, never leave wax heating while unattended, and know how to summon the fire brigade in a hurry.

This method of dipping I learned by reading an article in *Gleanings in Bee Culture* by J Iannuzzi.

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## PITY THE POOR APIARY INSPECTOR

If he's neat, he's conceited, and if he's careless he's sloppy. If he's pleasant, he's a flirt and if he's brief, he's a grouch. If he hurries, he overlooks disease and if he takes his time he's suspicious of your beekeeping.

If he finds AFB he had it in for you and if he doesn't find any, he was too easy.

If he burns your bees, he didn't give you a fair chance and if he doesn't burn them for you, he didn't want to help you. If he digs the hole and covers the burned residue before you get home, he didn't want you to see what he did. If he doesn't, he was too lazy to finish the job. He can't win.

(From the New Jersey Beekeepers' Association Newsletter).



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## NEW SERVICE FOR EXPORTERS

Interested in exporting? Well I'm sure you know already that it's not just a matter of shipping a few cartons of honey off to a supermarket in Timbuktu. Exporting takes commitment, perseverance and quite a few dollars.

Now there's a new service you can plug into that will make the whole job a lot easier. It's called Tradecom, and is the trade assistance and advice arm of the Department of Trade and Industry.

Tradecom can provide you with almost anything you need for exporting. Some examples:

- \* Specific reports on the market for your product (entry and tariff requirements, distributors, recommendations and how to get started).
- \* Help in exhibiting at trade fairs, from designing stands to arranging publicity for your exhibit.
- \* Assistance with developing joint ventures.

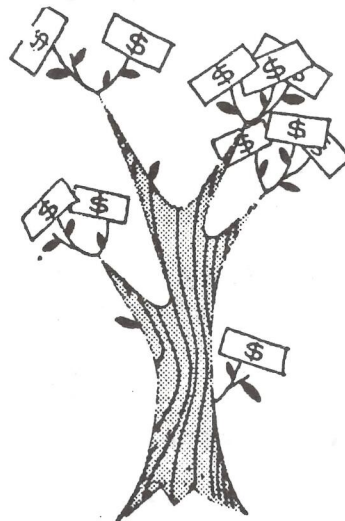
- \* Detailed market research.
- \* Help with arranging sales trips, interpreters, transport, escort officers.
- \* Almost any specific task that you require.

I'm sure you're already thinking about the cost! Well, of course these services don't come without charge. Their costs are increasingly having to be borne by the users, as the government reduces funding to Tradecom.

You'll pay a negotiated fee for small tasks, but for ongoing work you pay an annual "access fee" plus specific charges for extra work.

Tradecom have a useful selection of publications. These include guides to specific markets, a handbook on freighting, information on overseas regulations and commodity trends.

They also publish a magazine *Export News* \$35 per year (11 issues).



For further information on publications, write to the Publications Officer, NZ Trade Commission, Private Bag, Wellington.

To find out more about Tradecom's range of services, ring Gavin Young at their toll-free number - (04) 723 395.

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## NOT EXACTLY THEIR CUP OF TEA ...

While most humans find a good cup of tea quite refreshing, bees can't enjoy their equivalent. The nearest bees can get is tea nectar, which produces some odd effects.

It was noticed that colonies in part of the Himalayan foothills suffered considerable brood mortality each October, which was when tea bushes flowered. Larvae turned yellow and died, giving off a rancid odour.

By feeding dilute tea nectar to larvae, and by shifting colonies from the tea-growing area to another location, it was possible to show that tea nectar was the culprit.

However, the symptoms hadn't shown up in other tea-growing areas. It seems that where wild cherry is available in October and November, bees prefer to forage on it and so escape the poisonous effect of tea nectar. In the part of the Himalayan foothills where the problems arose, no alternative nectar is present.

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## NEW TRADING RULES NOW IN FORCE

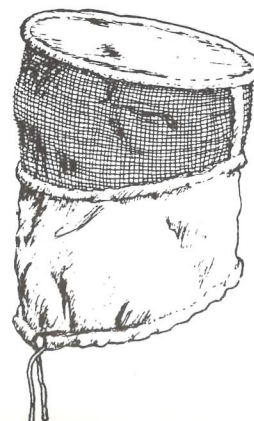
Beekeepers now have to be aware of two new laws which affect the way they do business. The Fair Trading Act 1986 and the Commerce Act 1986 both came into force on 1 April 1987.

Let's look at the Fair Trading Act first. It deals mainly with information (such as advertising), and you should have no trouble complying with this if you do business in a common-sense and conservative way.

Remember that any information must be full and adequate, and the old fallback of "let the buyer beware" no longer applies in trade.

You can't use "unfair trade practices" in your business, and in deciding what's unfair the following principles apply:

- A practice is unfair if it misleads anyone who is not "exceptionally stupid". (This is a considerable change from previous legislation, which prevented deception of "a reasonable person").



- The intention of your advertising is irrelevant : what must not deceive or mislead is the message that is understood by consumers.

So what does this mean? Some examples:

- "Sales" must mean that there has been a genuine reduction.
- Packaging mustn't mislead about its contents.
- Advertising claims based on surveys must relate to genuine surveys by independent bodies.

The Commerce Act relates more to the way you do business, especially if you reduce competition. You are not allowed to fix prices with your competitors, and lawyers advise that you shouldn't even discuss pricing with competitors in case it is interpreted as price fixing.

Traders in a dominant position are prevented from abusing that position, for instance by predatory pricing to eliminate smaller traders.

If you have any doubts about what you're presently doing it may pay to consult a lawyer - fines under these acts go up to \$300,000.

## Beehive Buzz



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OOPS, PARDON MY SLIP!

How scientifically-minded are New Zealand's school children? From a "highly-placed source" in the Education Department come this selection of clangers:

- ° The theory of evolution was greatly objected to because it made men think.
- ° The process of turning steam into water again is called conversation.
- ° To collect fumes of sulphur, hold a deacon over the flame in a test tube.

- Algebraic symbols are used when you do not know what you are talking about.
- Geometry teaches us to bisex angels.

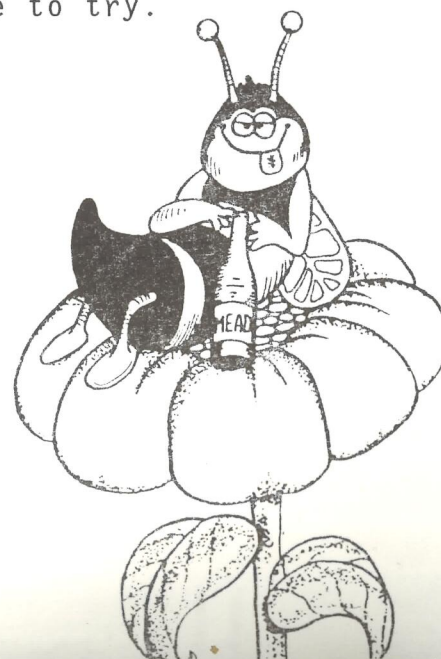


- An axiom is a thing so visible that it is not necessary to see it.
- A circle is a line that meets its other end without ending.
- The moon is a planet just like the earth, only deader.
- A super-saturated solution is one that holds more than it can hold.

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## FOR THOSE WINTER AILMENTS

If you're still struggling with winter colds and coughs, how about a hot honey drink. I'm sure many of you have a favourite recipe, but here's a new one you might like to try.





Place about a tablespoon of honey in a mug and pour hot water over, then stir until the honey is dissolved. Add a tablespoon of lemon juice and a shot of whatever you fancy; whisky, rum, brandy. Then drink and enjoy!

It probably won't do your cold any good at all, but enough of these drinks will make you feel better.

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So that's it for this issue. In answer to the many people who have asked - yes, I will still be writing *Beelines* from my new position in Tauranga. No matter where you live, you can continue subscribing to it.

Andrew

Andrew Matheson

So how do you feel-  
apart from insomnia,  
nightmares, loss of  
appetite, fatigue  
and loss of sexual  
potency?



Oh-just-fine...



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**Ministry of Agriculture and Fisheries**  
Private Bag, Nelson  
New Zealand  
Telephone (054) 81069